

## Amendments to the Claims

### **Claims 1-8 (Canceled)**

**Claim 9 (Previously Presented)** A p-type semiconductor comprising a plurality of elements, one of the elements being a localized band formation element, the localized band formation element being isovalent with at least one other of the elements of the p-type semiconductor and having a smaller electronegativity than an electronegativity of the at least one other element, wherein

another of the elements is an acceptor element, the acceptor element having fewer valence electrons than valence electrons of at least one other of the elements of the p-type semiconductor,

an amount of the localized band formation element in the p-type semiconductor is larger than an amount of the acceptor element in the p-type semiconductor,

the acceptor element has a lower energy level than a top of an energy band of the localized band formation element,

the acceptor element and the localized band formation element are distributed uniformly,

an amount of the localized band formation element in the p-type semiconductor is 2 atom % or less,

the p-type semiconductor is a compound semiconductor,

the compound semiconductor is a nitride semiconductor, and

the nitride semiconductor has at least one Group III element including aluminum and at least one Group V element including nitrogen.

**Claim 10 (Original)** The p-type semiconductor according to Claim 9,

wherein the acceptor element is at least one of carbon, silicon, germanium, tin, beryllium, magnesium, zinc and cadmium.

**Claim 11 (Original)** The p-type semiconductor according to Claim 10,

wherein the localized band formation element is at least one of phosphorus, arsenic and antimony.

**Claim 12 (Previously Presented)** A p-type semiconductor comprising a plurality of elements, one of the elements being a localized band formation element, the localized band formation element being isovalent with at least one other of the elements of the p-type semiconductor and having a smaller electronegativity than an electronegativity of the at least one other element, wherein

another of the elements is an acceptor element, the acceptor element having fewer valence electrons than valence electrons of at least one other of the elements of the p-type semiconductor,

an amount of the localized band formation element in the p-type semiconductor is larger than an amount of the acceptor element in the p-type semiconductor,

the acceptor element has a lower energy level than a top of an energy band of the localized band formation element,

the acceptor element and the localized band formation element are distributed uniformly,

an amount of the localized band formation element in the p-type semiconductor is 2 atom % or less,

the p-type semiconductor is a compound semiconductor,

the compound semiconductor is a nitride semiconductor, and

the nitride semiconductor is a compound semiconductor which has at least one Group III element including boron and at least one Group V element including nitrogen.

**Claim 13 (Previously Presented)** A p-type semiconductor comprising a plurality of elements, one of the elements being a localized band formation element, the localized band formation element being isovalent with at least one other of the elements of the p-type semiconductor and having a smaller electronegativity than an electronegativity of the at least one other element, wherein

another of the elements is an acceptor element, the acceptor element having fewer valence electrons than valence electrons of at least one other of the elements of the p-type semiconductor,

an amount of the localized band formation element in the p-type semiconductor is larger than an amount of the acceptor element in the p-type semiconductor,

the acceptor element has a lower energy level than a top of an energy band of the

localized band formation element,

the acceptor element and the localized band formation element are distributed uniformly, an amount of the localized band formation element in the p-type semiconductor is 2 atom % or less,

the p-type semiconductor is a compound semiconductor, and  
the compound semiconductor is an oxide semiconductor.

**Claim 14 (Previously Presented)** The p-type semiconductor according to Claim 13,

wherein the oxide semiconductor is a compound semiconductor which has at least one Group II element including zinc and at least one Group VI element including oxygen.

**Claim 15 (Original)** The p-type semiconductor according to Claim 14,

wherein the acceptor element is at least one of nitrogen, phosphorus, arsenic and antimony.

**Claim 16 (Original)** The p-type semiconductor according to Claim 15,

wherein the localized band formation element is at least one of sulfur, selenium and tellurium.

**Claim 17 (Previously Presented)** The p-type semiconductor according to Claim 13,

wherein the oxide semiconductor is a compound semiconductor which has at least one Group II element including beryllium and at least one Group VI element including oxygen.

**Claims 18-21 (Canceled)**

**Claim 22 (Previously Presented)** A p-type semiconductor comprising a plurality of elements, one of the elements being a localized band formation element, the localized band formation element being isovalent with at least one other of the elements of the p-type semiconductor and having a smaller electronegativity than an electronegativity of the at least one other element,

wherein the p-type semiconductor is a nitride semiconductor which has a crystal defect caused by missing a Group III element, and

wherein the localized band formation element is at least one of phosphorus, arsenic and antimony.

**Claims 23-27 (Canceled)**

**Claim 28 (Previously Presented)** A p-type semiconductor comprising a plurality of elements, one of the elements being a localized band formation element, the localized band formation element being isovalent with at least one other of the elements of the p-type semiconductor and having a smaller electronegativity than an electronegativity of the at least one other element,

wherein the p-type semiconductor is a nitride semiconductor which has at least one Group III element including aluminum and at least one Group V element including nitrogen.

**Claims 29-35 (Canceled)**

**Claim 36 (Previously Presented)** A p-type semiconductor comprising a plurality of elements, one of the elements being a localized band formation element, the localized band formation element being isovalent with at least one other of the elements of the p-type semiconductor and having a smaller electronegativity than an electronegativity of the at least one other element,

wherein the p-type semiconductor is an oxide semiconductor which has at least one Group II element including beryllium and at least one Group VI element including oxygen.

**Claims 37-76 (Canceled)**